CLAIMS

1. An illumination device in which light from a light source (23, 50, 62, 51, 63) enters a light guide plate (24) from a side surface thereof and is guided in a surface direction in the light guide plate to perform a surface emission from the light guide plate for illuminating a display member (13, 60, 15; 10, 80, 81):

wherein the light guide plate comprises

a first illuminating portion (26) for guiding light from the light source in the surface direction and radiating the light toward an upper surface side of the light guide plate, and

a second illuminating portion (27, 35, 40, 53, 61) for guiding light from the light source in the surface direction and radiating the light toward a lower surface side of the light guide plate; and

the display member is disposed in each of the upper surface side and the lower surface side of the light guide plate.

2. The illumination device as claimed in claim 1, wherein the first illuminating portion (26) comprises a concavo-convex portion (28) formed on one of upper and lower surfaces of the light guide plate (24), the concavo-convex portion diffusely reflecting light guided

in the light guide plate toward the upper surface side of the light guide plate.

3. The illumination device as claimed in claim 1, wherein the first illuminating portion (26) comprises a plurality of line-shaped prisms (32) having reflection surfaces (32a), on a lower surface of the light guide plate (24), each of the reflection surfaces of the line-shaped prisms reflecting light guided in the light guide plate toward the upper surface side of the light guide plate.

4. The illumination device as claimed in claim 2, wherein a reflection plate (25) is disposed on a lower surface of the first illuminating portion (26).

5. The illumination device as claimed in claim 1, wherein the second illuminating portion (27, 35, 40, 53, 61) comprises a plurality of line-shaped prisms (29, 31, 36, 54, 67, 68, 43, 45) having reflection surfaces (29a, 31a, 36a, 43a, 45a, 54a, 67a, 68a), on an upper surface of the light guide plate (24), each of the reflection surfaces of the line-shaped prisms reflecting light guided in the light guide plate toward the lower surface side of the light guide plate.

6. The illumination device as claimed in claim 5, wherein each of the line-shaped prisms (29) of the second illuminating portion (27) is provided to be approximately perpendicular to a line connecting the light source (23) and a portion of the side surface of the light guide plate (24) which faces the light source.

7. The illumination device as claimed in claim 6, wherein a side surface reflection portion (30) is provided on the side surface of the light guide plate (24) located in the second illuminating portion (27) side, the side surface reflection portion reflecting light which runs straight in the light guide plate and reaches an end surface of the light guide plate, toward inside of the second illuminating portion.

8. The illumination device as claimed in claim 5, wherein each of the line-shaped prisms (36, 54, 43, 45) of the second illuminating portion (35, 40, 53) is provided to be approximately in parallel with a line connecting the light source (23, 50, 51) and a portion of the side surface of the light guide plate (24) which faces the light source, and a side surface reflection portion (37, 52, 44, 46) is provided on the side surface of the light guide plate located in the second illuminating portion side, the side surface reflection

portion reflecting light which runs straight in the second illuminating portion and reaches an end surface of the light guide plate, toward inside of the second illuminating portion.

9. The illumination device as claimed in claim 5, wherein the first second illuminating portion (40) comprises: a first illuminating region (41) comprising a first prism (43) provided to be approximately in parallel with a line connecting the light source (light emitting element 23) and a portion of the side surface of the light guide plate (24) which faces the light source, and a first side surface reflection portion (44) for reflecting light which runs straight in the second illuminating portion and reaches an end surface of the light guide plate, toward inside of the second illuminating portion; and a second illuminating region (42) comprising a second prism (45) provided to be approximately in parallel with a line connecting the light source and a portion of the side surface of the light guide plate which faces the light source, and a second side surface reflection portion (46) for reflecting light which runs straight in the second illuminating portion and reaches an end surface of the light guide plate, toward inside of the second illuminating portion.

10. The illumination device as claimed in claim 1, wherein the light source comprises a first light emitting element (62) disposed at a predetermined position of an outer peripheral portion of the light guide plate (24) located in the first illuminating portion (26) side, and a second light emitting element (63) disposed at a predetermined position of the outer peripheral portion of the light guide plate located in the second illuminating portion (61) side, each of the first and the second light emitting elements emitting light with a color different to each other.

11. The illumination device as claimed in claim 10, wherein the second illuminating portion (61) comprises a first illuminating region (65) for radiating light from the first light emitting element (62) toward the lower surface side of the light guide plate (24), and a second illuminating region (66) for radiating light from the second light emitting element (63) toward the lower surface side of the light guide plate (24).

12. The illumination device as claimed in claim 1, wherein the light source comprises a first light emitting element (50) disposed at a predetermined position of an outer peripheral portion of the light guide plate (24)

located in the first illuminating portion (26) side, and a second light emitting element (51) disposed at a predetermined position of the outer peripheral portion of the light guide plate located in the second illuminating portion (53) side;

one of the first and the second light emitting elements (50) emits light in a visible ray region, and the other (51) emits light in a ultraviolet ray region; and

the display member (13, 13b, 15) comprises a light emitting portion (55) for emitting light in a visible ray region in response to light in a ultraviolet ray region.

13. The illumination device as claimed in claim 1, wherein the display member comprises a first display member (13, 15; 80) disposed in the upper surface side of the light guide plate (24), and a second display member (10, 81, 60) disposed in the lower surface side of the light guide plate at least at a portion corresponding to the second illuminating portion (27, 35, 40, 53, 61).

14. The illumination device as claimed in claim 13, wherein the first display member of the display member comprises a hand type display portion in which a hand (15) moves above a dial (13) having a light transmission property, and the second display member

comprises a flat display portion (10) for electrooptically displaying information.

15. The illumination device as claimed in claim 14, wherein a solar panel (75) is disposed on the lower surface of the light guide plate (24), and has an opening portion (76) corresponding to the flat display portion (10).

16. The illumination device as claimed in claim 13, wherein the first display member comprises a first display element (80) of a transmission type for electrooptically displaying information, and the second display member comprises a second display element (81) of a reflection type for electrooptically displaying information.

17. An electronic apparatus comprising the illumination device (6) as claimed in claim 1 and a device case for storing the illumination device, wherein the device case (1, 90) is provided with a window portion (2, 91) corresponding to the display member (13, 60; 15, 10, 80, 81) of the illumination device.

18. An illumination device in which light from a light source (23, 50, 62, 51, 63) enters a light guide

plate (24) from a side surface thereof and is guided in a surface direction in the light guide plate to perform a surface emission from the light guide plate for illuminating a display member (13, 15, 10, 166):

wherein the light guide plate has a light transmission property in a thickness direction thereof, a plurality of line-shaped prisms (125, 127, 130, 34, 138, 150, 175, 140, 151, 77) having reflection surfaces (25a, 27a, 30a, 34a, 38a, 40a, 50a, 51a, 75a, 77a) for reflecting light guided in the light guide plate in a surface direction toward a lower surface side of the light guide plate are formed on a whole upper surface of the light guide plate, and the display member is disposed at least in a lower surface side of the light guide plate.

19. The illumination device as claimed in claim 18, wherein the line-shaped prisms (125, 127) are provided to be approximately perpendicular to a line connecting the light source (23) and a portion of the side surface of the light guide plate (24) which faces the light source, and the reflection surfaces (25a, 27a) of the line-shaped prisms are provided to face one side.

20. The illumination device as claimed in claim 19, wherein a side surface reflection portion (128) is provided on the side surface of the light guide plate

(24), the side surface reflection portion reflecting light which is guided in the light guide plate in the surface direction and reaches an end surface of the light guide plate toward inside of the light guide plate.

21. The illumination device as claimed in claim 18, wherein the line-shaped prisms (130, 34, 138, 175, 140, 77) are provided to be approximately in parallel with a line connecting the light source (23, 47, 153, 48, 154) and a portion of the side surface of the light guide plate (24) which faces the light source; and the reflection surfaces (30a, 34a, 38a, 40a, 75a, 77a) of the line-shaped prisms are provided to face one side; and a side surface reflection portion (131, 135, 155, 39, 176, 141, 78) for reflecting light which is guided in the light guide plate and reaches an end surface of the light guide plate toward inside of the light guide plate is provided on the side surface of the light guide plate located in a side of the reflection surfaces of the prisms.

22. The illumination device as claimed in claim 21, wherein the light guide plate (24) comprises: a first illuminating region (136, 73) comprising a first prism (138, 175) provided with a reflection surface (38a, 75a) which faces one side, and a first side surface reflection

portion (39, 176) provided on the surface side of the light guide plate located in a side of the reflection surface of the first prism; and the second illuminating region (137, 74) comprising a second prism (140, 77) provided with a reflection surface (40a, 77a) which faces an opposite side of the reflection surface of the first prism, and a second side surface reflection portion (141, 78) provided on the surface side of the light guide plate located in a side of the reflection surface of the second prism.

23. The illumination device as claimed in claim 18, wherein the light source comprises a first light emitting element (47) disposed to face a predetermined position of an outer peripheral portion of the light guide plate (24) and a second light emitting element (48) disposed to face a predetermined position of the outer peripheral portion of the light guide plate located on a diagonal line from the first light emitting element, and the first and the second light emitting elements emit light with a color different to each other.

24. The illumination device as claimed in claim 23, wherein the light guide plate (24) comprises a first illuminating region (145) for radiating light from the first light emitting element (47) toward the lower

surface side of the light guide plate, and a second illuminating region (146) for radiating light from the second light emitting element (48) toward the lower surface side of the light guide plate.

25. The illumination device as claimed in claim 18, wherein the light source comprises a first light emitting element (153) disposed at a predetermined position of an outer peripheral portion of the light guide plate (24), and a second light emitting element (154) disposed at a predetermined position of the outer peripheral portion of the light guide plate located on a diagonal line from the first light emitting element; and one of the first and the second light emitting elements emits light in a visible ray region and the other emits light in a ultraviolet ray region, and a portion of the display member (56, 56a, 15) comprises a light emitting portion (59) for emitting light in a visible ray region in response to light in a ultraviolet ray region.

26. The illumination device as claimed in claim 18, wherein the display member comprises a dial (13) above which a hand (15) moves and/or a flat display element (10) for displaying information electrooptically.

27. The illumination device as claimed in claim

26, wherein the light guide plate (24) has a through hole (142, 144) through which a hand shaft (12) of the hand (15) which moves above the dial (13) is inserted, and a peripheral surface of the through hole is formed in a tapered shape.

28. The illumination device as claimed in claim 18, wherein the display member (56) has a light transmission property, and a solar panel (160) is disposed in a lower surface side of the display member.

29. The illumination device as claimed in claim 18, wherein the display member comprises a first display member (56, 165) having a light transmission property and a second display member (10, 166) having a light reflection property, and the light guide plate (24) is disposed between the first and the second display members.

30. The illumination device as claimed in claim 29, wherein the display member comprises a first display member (165) of a light transmission type for electrooptically displaying information and a second display member (166) of a reflection type for electrooptically displaying information.

31. An electronic apparatus comprising the

illumination device (6) as claimed in claim 18 and a device case (case 1, 180) for storing the illumination device, wherein the device case is provided with a window portion (2, 181) corresponding to the display member (13, 56, 15, 10, 165, 166) of the illumination device.